

Influence of sleep disturbances on cognitive performance in bipolar disorder. Sleep as a key factor that may contribute to neurodegenerative processes in bipolar disorder



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Abstract

In Bipolar Disorder (BD) the presence of cognitive impairments may suggest a risk of neurodegenerative processes, with profiles that may be like the observed in the behavioral variant frontotemporal dementia. Although multiple risk factors for neurocognitive impairments in BD have been identified as the number of affective episodes, psychotic symptoms, pharmacological treatment, and vascular disease, chronic sleep disturbances are not consistently considered as a risk factor for neurocognitive impairment in BD, even when some studies have found associations between cognitive performances and sleep disturbances. Objective: To compare the influence of sleep disturbances on cognitive performance in patients with Bipolar Disorder in euthymic phase and healthy subjects. Methods: BD patients and healthy subjects were evaluated through actigraphic devices for 7 days allowing to evaluate the sleep/wake patterns, circadian variables, sleep efficiency (SE), Waking after sleep onset (WASO) total sleep time (TST) and the Sleep Regularity Index (SRI). Other variables as Chronotype (MEQ) and subjective sleep quality (PSQI), were evaluated through structured scales. Cognitive processes of sustained attention, short term memory, and executive functions were evaluated through computational tools. Results: Significant differences were found between healthy subjects and BD patients in cognitive variables and in the presence of sleep disturbances, in which the age was correlated with worse cognitive performance and greater alterations in sleep variables associated with sleep efficiency, sleep quality and total sleep time. Conclusions: Among the risk factors, the number of affective episodes have showed correlations with cognitive performances and neuroimaging changes in previous studies, our results may suggest that sleep disturbances could be also associated with neurocognitive processes due that not just during affective episodes, but also in euthymic phase the sleep patterns may become irregular or to be notably reduced, affecting the sleep efficiency and possibly interfering with the neuroprotective processes underlying sleep mechanisms.

Biography

Francy Cruz is a Psychologist and Magister in Neurosciences, with an academic and practical trajectory focused on Neuropsychology; with experience in the evaluation of cognitive processes and a research approach through the participation in interdisciplinary groups focused on the study of clinical, genetic and imaging variables involved in neurodegenerative and psychiatric diseases. Currently Francy Cruz occupies a doctoral position in Clinical and Translational Science at the University of Pisa and conducts a research focused on the influence of chronotypes and sleep disturbances in clinical variables related with mood and cognition in patients with Bipolar Disorder.



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